

LISTING OF CLAIMS

The following listing of claims replaces all previous listings or versions thereof:

1. (original) A method of obtaining a transformed dihaploid plant comprising:
 - obtaining haploid sporophytic tissue;
 - transforming the haploid sporophytic tissue;
 - producing dihaploid tissue from the transformed haploid sporophytic tissue; and
 - regenerating a dihaploid plant from the dihaploid tissue.
2. (original) The method of claim 1 in which the sporophytic tissue is immature embryo, mature embryo, callus, nodal section, or meristem.
3. (original) The method of claim 1 in which the dihaploid plant is produced by treating the transformed haploid tissue with a chromosome doubling agent.
4. (original) The method of claim 3 in which the chromosome doubling agent is colchicine.
5. (original) The method of claim 1 in which the plant is corn.
6. (withdrawn) A method of obtaining a transformed dihaploid plant comprising:
 - obtaining haploid sporophytic tissue;
 - transforming the haploid sporophytic tissue;
 - regenerating a haploid plant; and
 - producing a dihaploid plant from the haploid plant.
7. (withdrawn) The method of claim 6 in which the plant is corn.
8. (withdrawn) The method of claim 6 in which the sporophytic tissue is immature embryo, mature embryo, callus, nodal section, or meristem.
9. (withdrawn) The method of claim 6 in which the dihaploid plant is produced by treating the transformed haploid plant with a chromosome doubling agent.

10. (withdrawn) The method of claim 9 in which the chromosome doubling agent is colchicine.
11. (original) A method of obtaining a transformed dihaploid plant comprising:
 - obtaining haploid tissue;
 - culturing the haploid tissue to form haploid callus;
 - transforming the haploid callus;
 - producing dihaploid callus from the transformed haploid callus; and
 - regenerating a dihaploid plant from the dihaploid callus.
12. (original) The method of claim 11 in which the plant is corn.
13. (original) The method of claim 11 in which the dihaploid callus is produced by treating the transformed haploid callus with a chromosome doubling agent.
14. (original) The method of claim 13 in which the chromosome doubling agent is colchicine.
15. (original) A method of obtaining a transformed dihaploid corn plant comprising:
 - obtaining haploid corn tissue;
 - culturing the haploid corn tissue to form haploid callus;
 - transforming the haploid callus;
 - producing dihaploid corn callus from the transformed haploid corn callus; and
 - regenerating a dihaploid corn plant from the dihaploid callus.
16. (original) The method of claim 15 in which the dihaploid callus is produced by treating the transformed haploid callus with a chromosome doubling agent.
17. (original) The method of claim 16 in which the chromosome doubling agent is colchicine.
18. (original) A transformed dihaploid corn plant produced by the method of claim 15.
19. (withdrawn) A method of obtaining a transformed dihaploid corn plant comprising:
 - obtaining haploid corn tissue;
 - culturing the haploid corn tissue to form haploid callus;
 - transforming the haploid callus;
 - regenerating a haploid plant from the transformed haploid corn callus; and producing a

dihaploid corn plant from the haploid corn plant.

20. (withdrawn) The method of claim 19 in which the dihaploid plant is produced by treating the transformed haploid plant with a chromosome doubling agent.

21. (withdrawn) The method of claim 20 in which the chromosome doubling agent is colchicine.

22. (withdrawn) A transformed dihaploid corn plant produced by the method of claim 19.

23. (withdrawn) A method of obtaining a transformed dihaploid corn plant comprising:

- obtaining haploid corn tissue;
- culturing the haploid corn tissue to form haploid multiple bud cultures;
- transforming the multiple bud cultures;
- producing dihaploid multiple bud cultures from the transformed multiple bud cultures;
- and

regenerating a dihaploid corn plant from the dihaploid multiple bud cultures.

24. (withdrawn) The method of claim 23 in which the dihaploid multiple bud cultures are produced by treating the transformed multiple bud cultures with a chromosome doubling agent.

25. (withdrawn) The method of claim 24 in which the chromosome doubling agent is colchicine.

26. (withdrawn) A transformed dihaploid corn plant produced by the method of claim 23.

27. (withdrawn) A hybrid corn plant produced by crossing the transformed dihaploid corn plant of claim 26 with another corn plant.